**Centers for Disease Control and Prevention** 

# National HIV Prevention Progress Report, 2013





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# **EXECUTIVE SUMMARY**

The Centers for Disease Control and Prevention (CDC) is the nation's health protection agency. As part of the CDC's National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, the Division of HIV/AIDS Prevention (DHAP) promotes health and quality of life by preventing HIV infection and reducing HIV-related illness and death in the United States. This CDC National HIV Prevention Progress Report describes progress toward achieving the goals and objectives of the DHAP Strategic Plan for 2011-2015. It uses data from CDC HIV surveillance systems to report on 21 indicators that support planning, monitoring, and improvement related to three key priorities of the National HIV/AIDS Strategy (NHAS):

- Reducing new HIV infections
- Increasing access to care and improving health outcomes for people living with HIV
- Reducing HIV-related health disparities

This report provides an overview of trends before the DHAP Strategic Plan for 2011-2015 was put in place, and, where data are available, presents results for the first year of the Strategic Plan's implementation. Progress toward achieving the 2015 goals is evaluated against annual targets. These targets are based on the assumption that large-scale programmatic change takes time. They also reflect the expectation that more improvement will occur over time as these changes are more fully implemented. Goals, objectives, and annual targets may be revised based on funding levels as well as scientific and programmatic advances.

CDC is committed to improving transparency and accountability. This CDC National HIV Prevention Progress Report reflects that commitment. Some of the indicators in this report are also used to monitor and report results for a number of important federal efforts including the NHAS, Healthy People 2020, the Government Performance and Results Act (GPRA), and the Department of Health and Human Service's Core HIV Indicators.

The results show some encouraging signs of progress, but they also draw attention to areas where more improvement is needed. The Progress At-A-Glance summarizes the most recent results described in this report. This report shows that:

- The annual targets were met or exceeded for 13 of the 21 indicators (62%). These indicators include the HIV transmission rate and knowledge of HIV-positive status.
- There was no change or movement away from the annual target for 5 of the 21 indicators (24%). These indicators include sexual risk behaviors among gay, bisexual, and other men who have sex with men (collectively referred to as MSM); new infections among MSM and Hispanics/Latinos; and linkage to HIV medical care among blacks/African Americans and Hispanics/Latinos.
- Progress could not be fully assessed for 3 of the 21 indicators (14%) that did not have data available for the annual target year but will have data available in future years.

The report highlights differences by gender, age, race/ethnicity, and HIV transmission risk. Making progress among those who are disproportionately affected by HIV is especially important for achieving national goals and improving health equity.

Achieving all of the nation's HIV prevention goals will not be easy and is dependent upon progress in groups that are disproportionately affected and progress made at the local level. Many programs may have to adopt new and more cost-effective strategies in order to realize the benefits of a high-impact approach to HIV prevention. The response of federal, state, and local agencies; health care providers; and community-based organizations should keep pace with the needs of a growing number of people living with HIV and those who are at greatest risk in order to achieve the 2015 goals.

# PROGRESS AT-A-GLANCE

Goal	Objective	2015 Goal	Annual Target	Result	Status		
Prevent New HIV Infections	Reduce new HIV infections by 25%	36,450	48,600	47,500	<b>Ø</b>		
	Increase knowledge of HIV-positive status to 90%	90.0%	80.9%	84.2%			
	Reduce late stage HIV diagnosis by 25%	19.1%	25.1%	24.9%			
	Reduce the perinatal HIV transmission rate by 25%	5.1	6.8	5.7			
	Reduce sexual risk behavior among MSM by 25%	10.3%	13.5%	13.7%	8		
	Reduce sexual or injection risk behavior among IDUs by 25%	55.0%	N/A	74.9%	N/A		
Improve Access to HIV Care and Health Outcomes	Reduce the HIV transmission rate by 30%	3.2	4.6	4.2	<b>Ø</b>		
	Increase linkage to HIV medical care to 85%	85.0%	66.0%	79.8%			
	Increase viral suppression among persons in HIV medical care by 10%	78.8%	N/A	71.6%	N/A		
	Reduce sexual risk behavior among persons in HIV medical care by 33%	8.6%	N/A	12.9%	N/A		
Reduce HIV-Related Health Disparities	Reduce new HIV infections among groups at increased risk by at least 25%						
	— MSM	21,675	28,900	31,400	8		
	— IDUs	3,975	5,300	3,900	✓		
	— Blacks/African Americans	15,900	21,200	20,900	<b>Ø</b>		
	— Hispanics/Latinos	6,750	9,000	9,800	8		
	Increase linkage to HIV medical care among all racial/ethnic groups to 85% or greater (goal changed from 75% to 85%)*						
	— Blacks/African Americans	85.0%	77.3%	75.9%	8		
	— Hispanics/Latinos	85.0%	83.2%	81.8%	8		
	— Whites	85.0%	83.6%	85.1%	<b>Ø</b>		
	— Persons of other races/ethnicities	85.0%	85.0%	85.9%	<b>Ø</b>		
	Increase viral suppression among specific groups by at least 20%						
	— HIV-diagnosed MSM	48.8%	40.7%	41.7%	<b>Ø</b>		
	— HIV-diagnosed Blacks/African Americans	39.2%	32.7%	34.9%			
	— HIV-diagnosed Hispanics/Latinos	43.9%	36.6%	37.2%	<b>Ø</b>		

Met or exceeded current annual target

Not met—moved toward annual target†

Not met—no change or moved away from annual target

Data not available for target year

Annual Targets and Results represent the most currently available data. See Indicator Summaries and on-line Technical Notes for baseline, target, and result years and additional information.

<sup>\*</sup>For linkage to HIV medical care among all racial/ethnic groups, the 2015 goal was increased from 75% or greater to 85% or greater.

<sup>&</sup>lt;sup>†</sup> This symbol did not apply to any indicator in this year's report. It is presented here because it may apply to indicator data in future years.

# Introduction

We've made significant progress, but our fight against HIV is far from over. More than three decades have passed since the first AIDS cases were reported in the United States. Since then we've made tremendous advances in the detection, prevention, and treatment of HIV. Scientific advances, such as new HIV testing technologies, pre-exposure prophylaxis (PrEP), and treatment as prevention have given us important new tools that have the potential to dramatically slow the further spread of HIV here and abroad.

Despite this progress, we continue to face major challenges. In the United States, more than 1.1 million people are living with HIV, and about 50,000 more become infected each year. About 1 in 6 people living with HIV do not know that they have the virus. Too many people die from HIV infection each year, and many more are not getting the medical care and treatment they need. Racial and ethnic disparities persist, and gay, bisexual, and other men who have sex with men (collectively referred to as MSM) still account for the largest number of new HIV infections. At the same time, many states, cities, and community-based organizations have had to do more with fewer resources.

The National HIV/AIDS Strategy (NHAS), released by the White House in July 2010, represents the nation's first-ever comprehensive federal plan to respond to HIV in the United States. The NHAS sets three broad goals for the nation—reducing new HIV infections; increasing access to care and improving health outcomes for people living with HIV; and reducing HIV-related health disparities. It calls for the nation to build on our successes in HIV prevention, care, and treatment, and it recognizes the need to refocus existing efforts in order to deliver better results.

The Centers for Disease Control and Prevention (CDC) is the nation's health protection agency. As part of the CDC's National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, the Division of HIV/AIDS Prevention (DHAP) promotes health and quality of life by preventing HIV infection and reducing HIV-related illness and death in the United States. The DHAP Strategic Plan for 2011-2015 supports the goals of the NHAS and provides a road map for CDC's response to domestic HIV. CDC's response includes supporting prevention programs, raising HIV awareness, tracking the HIV epidemic, and supporting prevention research. These activities are guided by CDC's High-Impact Prevention approach that ensures CDC is best allocating its limited resources and maximizing the effects of its and its partners' prevention efforts.

This CDC National HIV Prevention Progress Report describes progress toward achieving key CDC goals and objectives. It provides an overview of trends before the current DHAP Strategic Plan was implemented and, where data are available, presents results for the first year of the strategic plan. Progress toward achieving 2015 goals is evaluated against annual targets. These targets are based on the assumption that large-scale programmatic change takes time. They also reflect the expectation that more improvement will occur over time as these changes are more fully implemented. Goals, objectives, and annual targets may be revised based on funding levels as well as scientific and programmatic advances. This report is not intended to evaluate progress on the NHAS. The Office of National AIDS Policy has issued a separate report on the NHAS.

# **CDC's Approach to HIV Prevention**

**CDC's response to HIV is based on its High-Impact HIV Prevention approach** for targeting the most cost-effective and scalable interventions and aligning them geographically and demographically with the burden of HIV. The approach is designed to maximize the impact of federal prevention dollars and further our collective progress toward achieving the goals of the NHAS.

**CDC works with partners** in other federal, state, and local agencies as well as national, regional, and community-based organizations to support proven strategies that can reduce the risk of acquiring or transmitting HIV and improve the health of people living with HIV.

More information about CDC's domestic HIV prevention activities can be found in the DHAP Annual Report or online at www.cdc.gov/hiv.

# **Measuring Progress**

The twenty-one indicators in this report provide an objective way to assess progress toward achieving key HIV prevention goals.

They also provide feedback that guides CDC.

They also provide feedback that guides CDC planning and program improvement activities. CDC is committed to improving health equity and, whenever possible, CDC monitors progress on these indicators by gender, age, race/ethnicity, and HIV transmission risk. In addition, 11 indicators focus specifically on HIV-related disparities.

The data for these indicators come from three CDC HIV surveillance systems—the National HIV Surveillance System (NHSS), the Medical Monitoring Project (MMP), and the National HIV Behavioral Surveillance System (NHBS).

# The accurate and timely reporting and use of indicator data is a priority for CDC.

Producing high-quality data takes time. The data are collected by local jurisdictions that, depending on the system, rely on reporting from doctors' offices and laboratories as well as medical record abstractions, in-person interviews, and death records. Incomplete or duplicate information is often received and requires additional follow-up before the data can be considered complete and ready for public dissemination. CDC is actively working to improve the timeliness of these data.

## CDC HIV Surveillance Systems— Data Sources for Indicators

#### **National HIV Surveillance System (NHSS)**

**HIV Case Surveillance:** All 50 states, the District of Columbia, and 6 US dependent areas report confirmed diagnoses of HIV and AIDS to CDC including demographic characteristics, transmission category, and initial immune status. For 2011 data, 19 jurisdictions had reported to CDC all CD4 and HIV viral load test results for January 2009 through December 2011.

**HIV Incidence Surveillance:** CDC uses data on HIV testing and antiretroviral use history, as well as results from the serologic testing algorithm for recent HIV seroconversion (STARHS) methodology, to generate annual estimates of the number of new HIV infections. Since 2008, 25 jurisdictions have been funded to conduct incidence surveillance. Using a complex statistical model, CDC extrapolates data from these 25 jurisdictions to yield a national estimate for the 50 states and the District of Columbia.

#### **Medical Monitoring Project (MMP)**

MMP uses a three-stage sampling approach that is designed to produce nationally representative information about adults receiving HIV medical care in the US. Data are collected for samples of patients at outpatient HIV medical care facilities. Since 2009, 16 states, 6 cities, and Puerto Rico have been funded to participate.

#### National HIV Behavioral Surveillance System (NHBS)

NHBS conducts behavioral surveillance in rotating three-year cycles among three populations at high risk for HIV infection— MSM, injection drug users, and heterosexuals at increased risk for HIV infection. Data are collected in US cities with a high burden of AIDS. As of 2011, 20 cities have been funded to conduct NHBS.

This report evaluates progress compared to annual targets. Targets are based on the assumption that change will occur over time and will accelerate with each passing year. For each indicator, a baseline year was identified as the starting point for setting annual targets. The baseline years and 2015 goals established by the NHAS were adopted for the 7 objectives that come from the NHAS.

The annual target for 2010 is the same as the baseline year; this assumes stability prior to the implementation of the DHAP Strategic Plan. In setting targets for other years, it was expected that greater improvement would occur in future years as programmatic changes are more fully implemented. The following assumptions were used to measure annual progress toward 2015 goals: 5% of the total change would occur in 2011, 15% in 2012, 20% in 2013, 30% in 2014, and 30% in 2015. These annual targets take into account the time needed for program planning, start-up activities, and for effects of these changes to be seen in the data. Over time, goals, objectives, and annual targets may be updated as revised estimates become available so that these indicators represent the most accurate data at the time the report is published.

This report assesses whether annual targets have been met and whether there has been progress toward the 2015 goals. It does not use statistical tests to assess changes over time, differences between groups, or differences between the result and the target. This report is intended to provide a qualitative overview of where there has been movement toward the 2015 goal and where additional progress is needed. Statistically significant change is not expected from each year to the next and may not always be necessary to achieve the 2015 goal. Additional data for some indicators are available in other publications and may include information about statistical significance.

This report describes annual progress toward 2015 goals and objectives. For each objective, a symbol is assigned to denote if the annual target was:



Met or exceeded



Not met but available data show improvement\*



Not met and available data show no change or movement away from the target



Not able to be assessed because data are not available for the target year

<sup>\*</sup> This symbol did not apply to any indicator in this year's report. It is presented here because it may apply to indicator data in future years.

Many of these are part of other federal performance-related monitoring and reporting activities. This report identifies the monitoring and reporting activities that each indicator is used for. These are noted in the indicator summaries with the following symbols:



National HIV/AIDS Strategy—a comprehensive national HIV/AIDS plan with clear and measurable targets to be achieved by 2015



Government Performance and Results Act (GPRA)—holds federal agencies accountable for achieving results through goal setting and performance measurement. Results are reported with the President's annual budget request.



**Healthy People 2020 (HP 2020)**—science-based, national objectives for improving the health of all Americans and measuring the impact of prevention activities



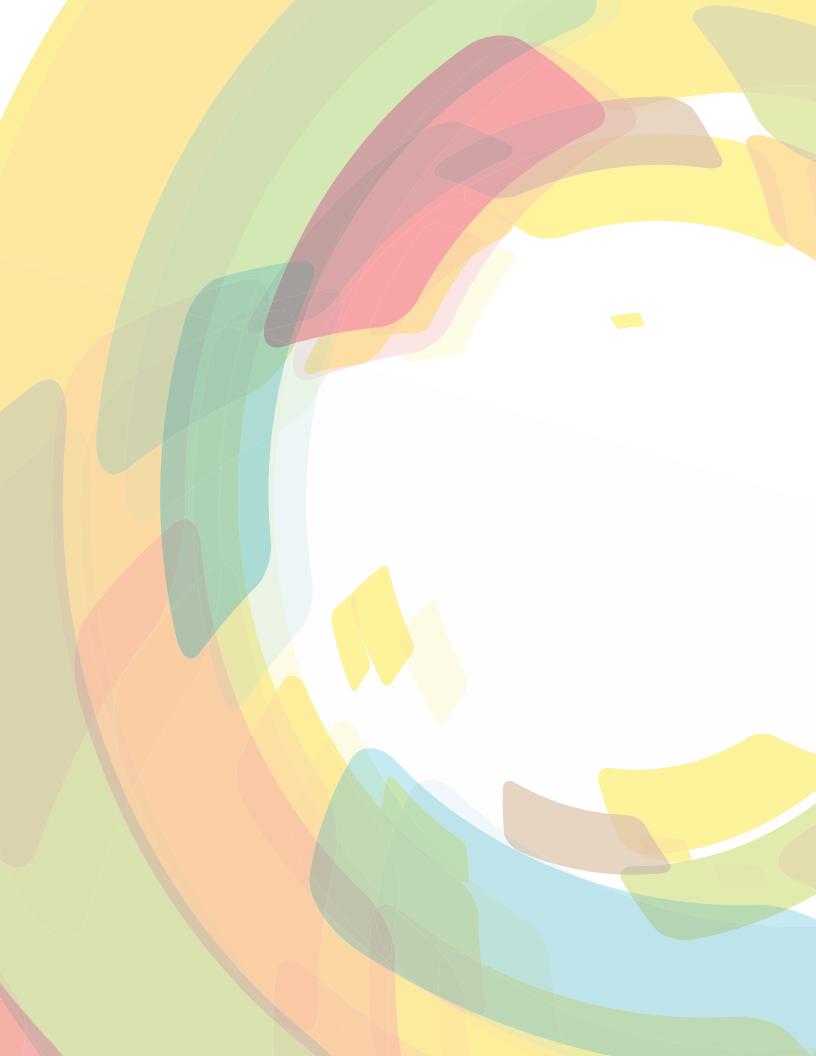
**Department of Health and Human Services (HHS) Core HIV Indicators**—seven core indicators for monitoring HHS-funded HIV prevention, treatment, and care services

# **Looking Forward**

CDC's HIV prevention efforts in the United States support the NHAS and are guided by the DHAP Strategic Plan for 2011-2015. **However, achieving all of the nation's HIV prevention goals will not be easy.** 

- Fully implementing High-Impact Prevention will take time and may require that many CDC-funded agencies make substantial changes in the planning and implementation of HIV prevention programs in order to have the greatest possible impact using the most cost-effective prevention strategies.
- Decreased funding for HIV programs experienced by many state and local governments and community-based organizations may have an adverse effect on their ability to provide high quality HIV prevention services to those who are at risk for HIV infection.
- Effective HIV treatment has made it possible for more people with HIV to live longer, healthier lives. This is a positive result of important advances in HIV testing, medical care, and treatment. It also means there are more people living with HIV in need of prevention services, HIV medical care, and treatment.

The indicators in the CDC National HIV Prevention Progress Report provide an important opportunity to reflect on our collective progress—where we've been successful, and where we need to do better. In order to overcome the challenges and accelerate progress, we all need to do our part to achieve the nation's HIV prevention goals.











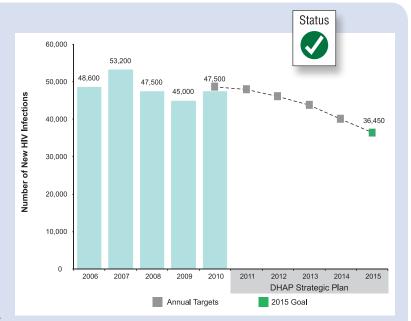
# REDUCE NEW HIV INFECTIONS

Reduce the annual number of new HIV infections by 25%

Reducing the number of new HIV infections is DHAP's number one priority. Too many people get HIV each year in the United States. HIV infection has many costs to individuals, families, and communities.

There were slightly fewer new HIV infections in 2010 compared to 2006, and the 2010 target (48,600) was met. However, the number of new HIV infections remains unacceptably high.

CDC compared data for 2008 and 2010 for key subgroups and found that the overall stability in the number of new infections masks important underlying trends. For example, new HIV infections decreased 21% among women (data



not shown) and were stable or decreased in all transmission risk groups except gay, bisexual, and other men who have sex with men (collectively referred to as MSM).

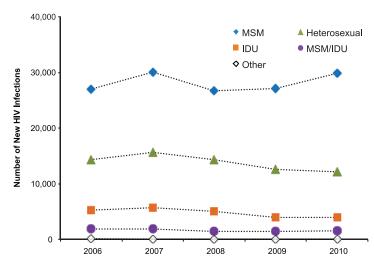
High-Impact Prevention, emphasizing proven, cost-effective and scalable interventions, will be needed to achieve the 2015 goal.

Data Source: National HIV Surveillance System (NHSS). See references and on-line Technical Notes for additional information.

47,500 new HIV infections occurred in 2010

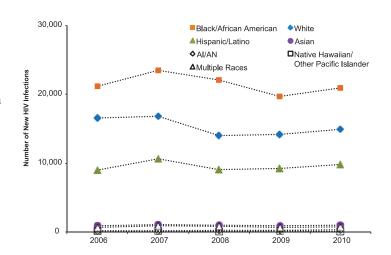
## **New HIV Infections by Transmission Risk**

- More HIV infections occur among MSM than any other risk group.
- Comparing 2008 to 2010, HIV infections attributed to heterosexual transmission decreased 15% and new infections attributed to injection drug use decreased 22%.
- During this time, HIV infections increased 12% among MSM overall and 22% among young MSM aged 13-24 years. [data not shown]
- It will be necessary to reduce HIV infections among MSM to achieve the 2015 goal.



## **New HIV Infections by Race/Ethnicity**

- More HIV infections occur among blacks/ African Americans than any other racial/ ethnic group.
- Comparing 2008 to 2010, new HIV infections were stable for all race/ethnicity groups. There was, however, a 21% reduction in new HIV infections among black/African American females. [data not shown]
- In order to achieve the 2015 goal, reductions in new HIV infections are needed across racial/ethnic groups, especially blacks/ African Americans.







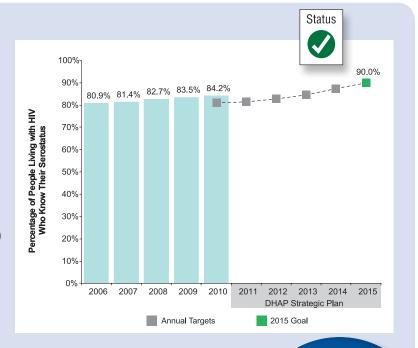


# INCREASE KNOWLEDGE OF HIV+ STATUS

Increase the percentage of people living with HIV who know their serostatus to 90%

People living with HIV need to know their HIV status in order to get the right medical care, protect their health, and reduce HIV transmission to others. HIV testing efforts have succeeded in reducing the number of persons with undiagnosed HIV infection.

From 2006 to 2010, the percentage of people living with HIV who had been diagnosed (and who are assumed for this indicator to know their serostatus) increased from 80.9% to 84.2%. This means that 5 of 6 people living with HIV in 2010 knew their status. Consistent improvement was seen from year to year, and the 2010 target (80.9%) was exceeded.

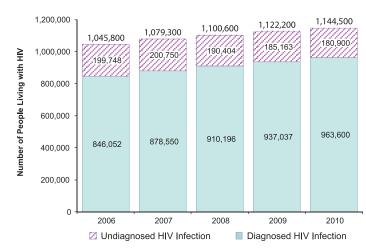


But there is more to be done. About 180,000 people in the U.S. are living with undiagnosed HIV infection. Each new infection will be harder to find as the number of people with undiagnosed HIV decreases. In order to achieve the 2015 goal, testing efforts will need to reach more people with undiagnosed infection through a combination of routine HIV screening and targeted HIV testing in clinical and community settings.

5 of 6 people living with HIV in 2010 had been diagnosed

## Fewer People have Undiagnosed HIV Infection

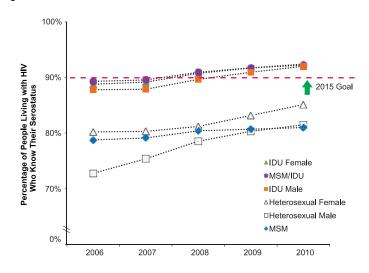
- Almost 1 million people living with HIV had been diagnosed as of 2010.
- The total number of people living with HIV (HIV prevalence) increased 9% from 1,045,800 in 2006 to 1,144,500 in 2010.
- Even though HIV prevalence increased, the number of people with undiagnosed HIV infection decreased 9% from 199,748 in 2006 to 180,900 in 2010.



Data Source: National HIV Surveillance System (NHSS). See references and on-line Technical Notes for additional information.

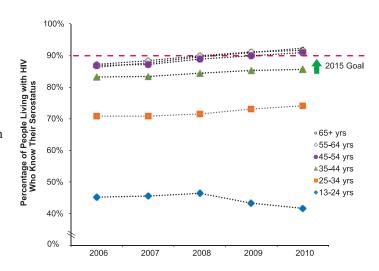
#### **Knowledge of HIV-Positive Status by Transmission Risk**

- Diagnosed HIV infection among people living with HIV remained fairly stable or improved slightly in most transmission risk groups from 2006 to 2010. For heterosexual males, the percentage of people living with HIV whose infection had been diagnosed increased 12% from 2006 to 2010.
- The 2015 goal was exceeded in 2009 and 2010 for male and female injection drug users (IDUs).
- The greatest improvement is needed among gay, bisexual, and other men who have sex with men (collectively referred to as MSM), heterosexual males, and heterosexual females.



#### **Knowledge of HIV-Positive Status by Age**

- The overall improvement in diagnosis of HIV-positive status has been driven by gains in older age groups. In 2010, the 2015 goal had been met for people aged 45 years and older.
- Young people aged 13-24 years living with HIV are least likely to have had their infection diagnosed. The percentage of those who had been diagnosed declined 8% in this group from 2006 to 2010. Young people may have been infected more recently and have had less time to be tested and diagnosed compared to older adults.
- In order to achieve the 2015 goal, it will be especially important to increase knowledge of HIV status among people under 35 years of age.









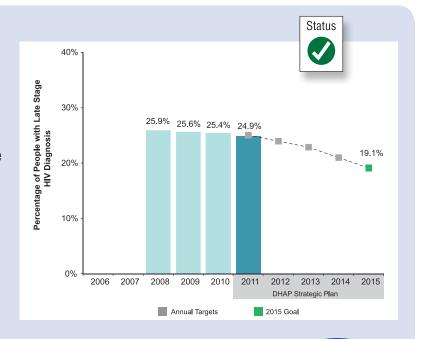
# REDUCE LATE STAGE HIV DIAGNOSIS

Reduce the percentage of people with a diagnosis of stage-3 HIV infection (AIDS) within 3 months after HIV diagnosis by 25%

Early diagnosis improves the health and survival of people with HIV and reduces HIV transmission. People who are diagnosed with HIV infection at an advanced stage of disease have most likely been infected for many years. This represents multiple missed opportunities to diagnose and treat the infection and to prevent transmission to others.

The 2011 target (25.1%) was met, reflecting modest progress in decreasing the percentage of persons with a late diagnosis.

Widespread implementation of routine HIV screening and more frequent testing among those at greatest risk will be necessary to further reduce the percentage of people with a late stage HIV diagnosis.

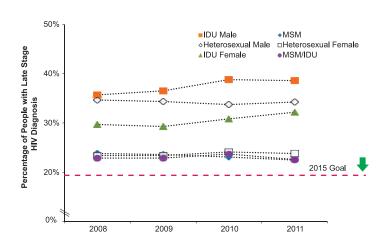


Data Source: National HIV Surveillance System (NHSS). See references and on-line Technical Notes for additional information.

About 1 of 4 people living with HIV are diagnosed late

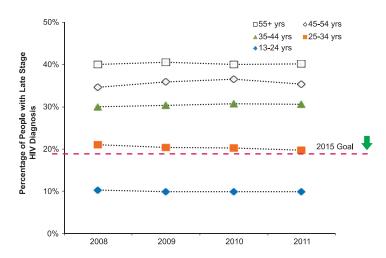
#### Late Stage HIV Diagnosis by Transmission Risk

- Late diagnosis remained fairly stable among most transmission risk groups from 2008 to 2011. During this time, there was an 8% increase in late diagnosis among female injection drug users (IDUs) and an 8% increase among male IDUs.
- More progress is needed in reducing late diagnoses across all transmission risk groups in order to achieve the 2015 goal.
- The greatest improvement is needed for IDUs and heterosexual men. These groups are furthest from the 2015 goal.



#### Late Stage HIV Diagnosis by Age

- Overall, the percentage of people with a late stage diagnosis was fairly stable within age groups from 2008 to 2011.
- The percentage of persons with a late diagnosis increases with age.
- The 2015 goal had been met in all years among those aged 13-24 years.
- In order to achieve the overall 2015 goal, it will be especially important to decrease late stage diagnoses among persons aged 35 years and older.

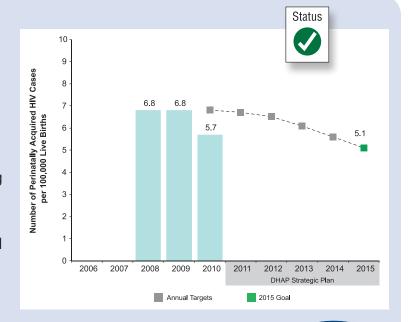


# REDUCE PERINATAL HIV TRANSMISSION

Reduce the perinatal HIV transmission rate by 25%

Perinatal HIV transmission (from mother to child) can occur during pregnancy, labor and delivery, or breastfeeding. The perinatal HIV transmission rate measures the number of infants diagnosed with perinatally acquired HIV infections per 100,000 live births among black/African American, Hispanic/Latino, and white mothers. It allows us to assess whether this type of HIV transmission is increasing or decreasing over time.

From 2008 to 2010, there was a 16% reduction in the rate of perinatally acquired HIV infections; the 2010 target (6.8) was met. HIV testing of pregnant woman, effective HIV treatment for women living with the virus and their infants, and other interventions have resulted in a decline in



the number of infants who were perinatally infected with HIV.

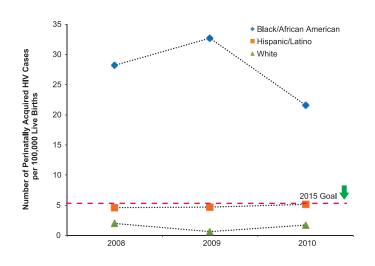
Achieving the 2015 goal will require improvements in comprehensive reproductive health care (including HIV testing) as well as reaching and providing HIV treatment to HIV-infected pregnant women. In 2012, CDC developed a framework for eliminating perinatal HIV transmission in the United States that, if fully implemented, would further reduce the annual number of perinatally acquired infections.

The perinatal transmission rate decreased 16% from 2008 to 2010

#### **Perinatal HIV Transmission by Race/Ethnicity**

- From 2008 to 2010, perinatal transmission was consistently higher among black/African American infants than Hispanic/Latino or white infants. The decrease among black/ African American infants from 2009 to 2010 is a promising sign, but substantial disparities remain.
- The 2015 goal was met in 2008, 2009 and 2010 among white and Hispanic/Latino infants.
- There is a need to further reduce perinatal transmission, especially for black/African American women and their infants.

Data Source: National HIV Surveillance System (NHSS). See references and on-line Technical Notes for additional information.





# REDUCE SEXUAL RISK BEHAVIOR AMONG MSM

Reduce the percentage of men who have sex with men (MSM) who report unprotected anal intercourse with a male sex partner of discordant or unknown HIV status during their last sexual encounter by 25%

Unprotected anal sex is the primary risk for HIV infection among gay, bisexual, and other men who have sex with men (collectively referred to as MSM). The majority of MSM have tried to lower their HIV risk by not having or reducing unprotected anal sex or by only having unprotected anal sex with someone whose HIV status is the same as their own.

Unprotected anal sex with any partner represents a potential risk for HIV transmission. Unprotected anal sex with a different (discordant) HIV status partner represents an even greater risk.

CDC collects data about sexual risk behaviors among MSM every three years in selected cities. Comparing

2008 and 2011, there was no change in the percentage of MSM who reported unprotected anal sex during their last sexual encounter with a male partner whose HIV status was believed to be different than their own (discordant) or was unknown. In both years, 13.7% reported unprotected anal sex with a discordant or unknown HIV status partner during their last sexual encounter. The 2011 target of 13.5% was not met.

A little more than half of MSM reported unprotected anal sex with one or more partners of any HIV status in the past 12 months. Slightly more men reported any unprotected anal sex in 2011 (57%) compared to 2008 (54%).

Among MSM, there was no change in unprotected anal sex with a discordant/unknown HIV status partner



The 2015 goal was not met for any age group in 2011, and the change across years did not differ by age. Among racial/ethnic groups, the 2015 goal was met for Asians and Native Hawaiians/Other Pacific Islanders in 2011. American Indian/Alaska Native MSM were furthest from the 2015 goal.

The lack of change in this indicator, coupled with increasing numbers of new HIV infections among MSM, is especially worrisome. There is an urgent need to improve the effectiveness of HIV prevention efforts for all MSM, especially young, racial/ethnic minority, and HIV-positive MSM. Reducing unprotected anal sex among MSM, especially with discordant/unknown HIV status partners, remains an important public health goal.

Data Source: National HIV Behavioral Surveillance System (NHBS). See references and on-line Technical Notes for additional information.

# REDUCE SEXUAL OR INJECTION RISK BEHAVIOR AMONG IDUS

Reduce the percentage of injection drug users (IDUs) who report risky sexual or drug injection behavior during the past 12 months by 25%

The use of non-sterile injection equipment and risky sexual behaviors both put injection drug users (IDUs) at increased risk for getting or transmitting HIV.

CDC collects data about sexual and drug use behaviors among IDUs every three years in selected cities. For this indicator, risky sexual behavior is defined as unprotected vaginal or anal sex with a partner of the opposite sex, regardless of HIV status, at any time during the past 12 months.

Overall, risk among IDUs was stable from 2006 to 2009. In 2009, 74.9% of IDUs reported syringe sharing or unprotected sex in the previous 12 months. About one-third (34%) reported sharing

syringes. About two-thirds (69%) reported having unprotected vaginal sex in the previous 12 months; 23% reported having unprotected anal sex in the previous 12 months.

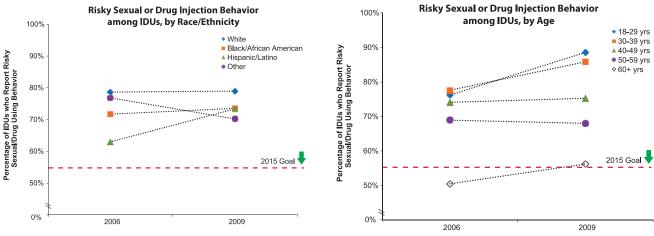
Even though risk was stable overall, it increased among Hispanic/Latino IDUs, those under 40 years of age, and those 60 years of age and older.

In 2009, no group had met the 2015 goal. Whites, women, and those under 40 years were furthest from the goal. Progress will be evaluated against the 2012 target when results for that year are available.

In order to achieve the 2015 goal, HIV prevention efforts for IDUs should address risky sexual behavior as well as syringe sharing and the use of other non-sterile injection equipment.

Status 100% N/A 90% Percentage of IDUs who Report Risky Sexual/Drug Using Behavior 80% 74.9% 73.1% 70% 60% 55.0% 50% 40% 30% 20% 10% 2012 2013 2014 2008 DHAP Strategic Plan 2015 Goal Annual Targets

Both drug injection and unprotected sex are risks for IDUs



Data Source: National HIV Behavioral Surveillance System (NHBS). See references and on-line Technical Notes for additional information.







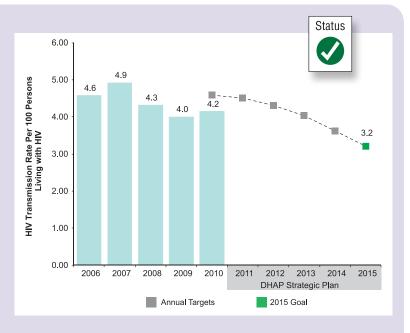
# REDUCE HIV TRANSMISSION

Reduce the HIV transmission rate by 30%

The HIV transmission rate is another way of assessing the impact of prevention, care, and treatment. It measures the number of new HIV infections in a given year per 100 people living with HIV.

The HIV transmission rate is an important measure of progress because it takes into account changes in the number of people living with HIV.

The HIV transmission rate decreased about 9% from 4.6 in 2006 to 4.2 in 2010. The 2010 target (4.6) was exceeded. This means that fewer infections are being transmitted on average by people living with HIV. As a



result, the number of new HIV infections has remained stable, even though the number of people living with HIV increased 9% from 1,045,800 in 2006 to 1,144,500 in 2010.

Early detection of HIV infection and comprehensive prevention with positives (including improved linkage and retention in high-quality HIV medical care) will be needed to further reduce the HIV transmission rate and achieve the 2015 goal.

Data Source: National HIV Surveillance System (NHSS). See references and on-line Technical Notes for additional information.

The HIV transmission rate decreased 9% from 2006 to 2010





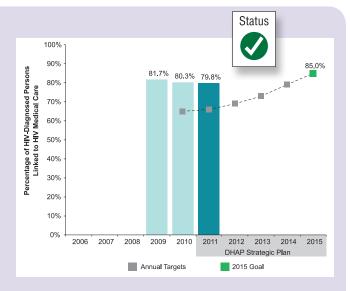


# INCREASE LINKAGE TO HIV MEDICAL CARE

Increase the percentage of persons diagnosed with HIV who are linked to HIV medical care within 3 months after diagnosis to 85%

Linking persons diagnosed with HIV to HIV medical care soon after diagnosis is essential for improving their health and reducing the risk of transmission to others. People with HIV should be linked to HIV medical care as soon as possible after diagnosis.

CDC monitors linkage to HIV medical care using laboratory data from areas with complete reporting of CD4 and viral load test results. People who had a CD4 or viral load test within 3 months after diagnosis are counted as being linked to HIV medical care. The number of areas these data are based on increased from 13 for 2009 to 19 for 2011. The number of areas reporting these data is expected to increase in coming years, providing a better representation of the nation as a whole.



Although the 2011 target (66.0%) was met, the percentage of persons diagnosed with HIV who were linked to HIV medical care within 3 months after diagnosis remained fairly stable at 81.7% in 2009 and 79.8% in 2011. Results showed some movement toward the 2015 goal when the analysis was limited to the areas that had reported data for all 3 years. Complete reporting of laboratory data is needed in more areas to provide better national estimates and improve the health of people living with HIV.

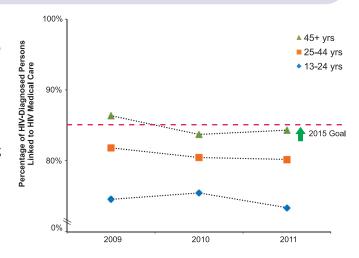
4 of 5 people diagnosed with HIV were linked to HIV medical care within 3 months

In 2011, the 2015 goal had been achieved for whites and persons whose race/ethnicity was classified as other. In 2011, blacks/African Americans who were diagnosed with HIV were least likely to have been linked to HIV medical care (see pages 26-28).

Programs that conduct HIV testing should consider establishing protocols and implement strategies that facilitate timely linkage to HIV medical care for all people who are diagnosed with HIV. These strategies could include the use of laboratory and other surveillance data to improve linkage to care and other health outcomes among HIV-diagnosed persons.

#### Linkage to HIV Medical Care by Age

- Linkage to HIV medical care did not improve in any age group from 2009 to 2011. As of 2011, no group was at or above the 2015 goal.
- Persons in the youngest age group (13-24 years) were furthest from the 2015 goal each year during 2009 to 2011.



Data Source: National HIV Surveillance System (NHSS). See references and on-line Technical Notes for additional information.

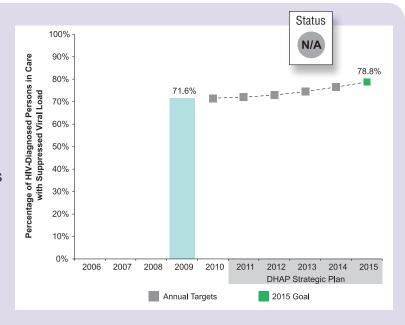


# INCREASE VIRAL SUPPRESSION AMONG PERSONS IN HIV MEDICAL CARE

Increase the percentage of HIV-diagnosed persons in HIV medical care with a suppressed viral load by 10%

Reducing the level of HIV in a person's body to a very low or undetectable level (viral suppression) is a primary goal of HIV treatment. A person's viral load is suppressed when the results of a viral load test show that HIV is undetectable or that there are 200 or fewer copies of HIV per milliliter of plasma.

Having a suppressed viral load improves the health of people living with HIV, increases survival, and reduces the risk of transmitting HIV. Staying in HIV medical care and adhering to HIV treatment are essential for achieving and maintaining a suppressed viral load. People who keep their medical appointments and take their HIV



medication as prescribed are more likely to have a suppressed viral load than those who do not. This indicator is based on nationally representative data that come from the Medical Monitoring Project (MMP). MMP is a CDC-funded surveillance project that collects information about people with HIV who are receiving HIV medical care in the United States and Puerto Rico.

In 2009, about 3 of 4 people with HIV who were in HIV medical care (71.6%) had a suppressed viral load. No transmission risk group met the 2015 goal. Viral suppression was highest among gay, bisexual, and other men who have sex with men (collectively referred to as MSM) (75.6%), and lowest among persons who had injected drugs in the past 12 months (58.5%). Across racial/ethnic groups, the 2015 goal was met among whites only (79.5% viral suppression); non-Hispanic blacks were furthest from the goal (64.1%). Viral suppression increased with age, ranging from 56.1% among 18-29 year olds to 79.3% among persons aged 50 years and older. The 2015 goal was met for those aged 50 years and older. By gender, males were closest to the 2015 goal (73.6%), followed by transgender persons (67.9%), and females (66.1%).

3 of 4 HIVdiagnosed people in HIV medical care had achieved viral suppression

Reducing HIV viral load has multiple benefits for people living with HIV, their partners, and society. Better retention in HIV medical care, early and effective HIV treatment, and greater adherence to HIV treatment can all contribute to increasing viral suppression among people who are in HIV medical care. Health care providers, health departments, community-based organizations, and people living with HIV all have important roles to play in increasing viral suppression.

Data Source: Medical Monitoring Project (MMP). See references and on-line Technical Notes for additional information.

# REDUCE SEXUAL RISK BEHAVIOR AMONG PERSONS IN HIV MEDICAL CARE

Reduce the percentage of HIV-diagnosed persons in HIV medical care who report unprotected anal or vaginal intercourse during the past 12 months with a partner of discordant or unknown HIV status by 33%

Unprotected anal or vaginal sex between someone who is living with HIV and an uninfected partner accounts for the majority of HIV infections in the United States. HIV treatment reduces the risk of HIV transmission, but viral load can vary over time and can be higher in some parts of the body than others. This means that all people with HIV, including those on treatment, may have the biological potential to transmit HIV during unprotected anal or vaginal sex with an HIV-discordant partner (that is, a partner whose HIV status is different from their own).

In 2009, about 1 of 8 HIV-diagnosed persons who were in HIV medical care (12.9%) reported unprotected anal or vaginal sex in the past 12 months with a

partner whose HIV status they did not know or knew to be discordant.

Status 30% N/A Percentage of HIV-Diagnosed Persons who Reported Risky Sexual Behavior 20% 12 9% 2013 2014 2015 2007 2008 2009 2010 2011 2012 DHAP Strategic Plan Annual Targets 2015 Goal

No transmission risk group met the 2015 goal in 2009. Persons who had injected drugs in the past 12 months (27.4%) were furthest from the 2015 goal. Including those who had injected drugs, women who had sex with men (14.8%) and gay, bisexual, and other men who had sex with men (collectively referred to as MSM) (14.0%) were furthest from the 2015 goal. Across racial/ethnic groups, non-Hispanic blacks were closest to the 2015 goal (10.6%), followed by Hispanics/Latinos (13.2%), and non-Hispanic whites (14.9%).

Unprotected sex with a discordant/unknown HIV status partner decreased with age, ranging from 25.7% among 18-29 year olds, 20.1% among 30-39 year olds, and 12.3% among 40-49 year olds. Persons aged 50 years and older were least likely to report unprotected sex with a discordant/unknown HIV status partner (7.7%), which exceeded the overall 2015 goal. By gender, unprotected sex

with a discordant/unknown HIV status partner was highest among transgender persons (18.5%), followed by females (14.4%), and males (12.2%).

Most HIVdiagnosed persons
in HIV medical
care did not
report engaging in
risky sex

People who are diagnosed with HIV should receive a comprehensive package of prevention services that improves their health, reduces their risk of sexually transmitted infections (STIs), and reduces the risk of HIV transmission. These include linkage to and retention in HIV medical care, risk screening and risk-reduction interventions, partner services, STI services, reproductive health care and prevention of perinatal transmission, and other medical and social services, such as substance use and mental health services.

Data Source: Medical Monitoring Project (MMP). See references and on-line Technical Notes for additional information.

# REDUCE HIV-RELATED DISPARITIES: NEW HIV INFECTIONS

Reduce the annual number of new HIV infections among men who have sex with men (MSM), injection drug users (IDUs), blacks/African Americans, and Hispanics/Latinos by at least 25% in each group

Gay, bisexual, and other men who have sex with men (collectively referred to as MSM), injection drug users (IDUs), blacks/African Americans, and Hispanics/Latinos are all disproportionately affected by HIV and are at increased risk of becoming newly infected with HIV. Achieving the nation's 2015 goal for reducing HIV incidence will be heavily influenced by our ability to reduce HIV infections in these groups.

This indicator treats MSM and MSM-IDUs as a single group—data for MSM include those who were also IDUs. Most of the indicators in this report treat MSM and MSM-IDUs as separate transmission risk groups.

Comparing 2008 to 2010, new HIV infections decreased among IDUs but increased among MSM. New HIV infections increased among Hispanics/Latinos and remained stable among blacks/African Americans. The 2010 targets were met for IDUs and blacks/African Americans. The 2010 targets were not met for either MSM or Hispanics/Latinos.

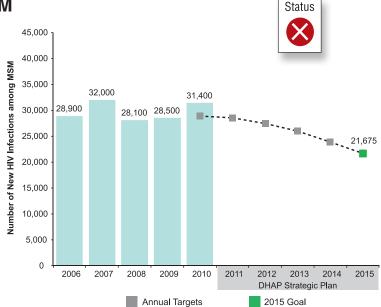
Long-standing disparities represent significant challenges to preventing new HIV infections and achieving health equity in the United States. In order to reduce these disparities, cost-effective and scalable HIV prevention interventions must be aligned geographically and demographically with the HIV epidemic.

Data Source: National HIV Surveillance System (NHSS). See references and on-line Technical Notes for additional information.

HIV infections
decreased
among IDUs but
increased among
MSM

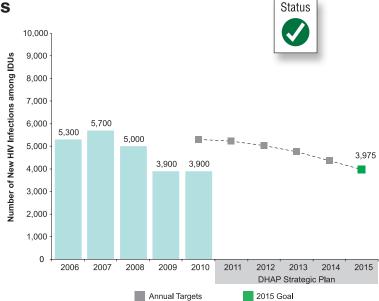
## **New HIV Infections among MSM**

- In 2010, MSM represented 2% of the US population but accounted for 66% of new HIV infections (including MSM-IDUs).
- Overall, new HIV infections increased 12% among MSM from 2008 to 2010. The 2010 target was not met.
- Because of this increase, new HIV infections among MSM need to decrease 31% from 2010 levels in order to achieve the 2015 goal.



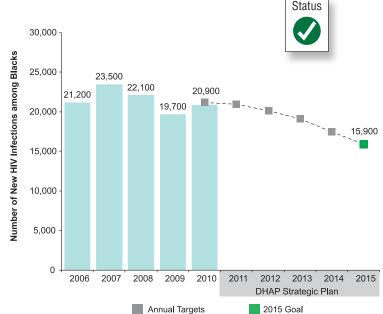
#### **New HIV Infections among IDUs**

- About 1 of 12 new HIV infections (8%) in 2010 was among males and females whose infection was attributed to injection drug use.
- Comparing 2008 to 2010, new HIV infections among IDUs decreased 22%. The 2010 target was met. If new infections among IDUs stay at or below this level, the 2015 goal will be met.
- Among female IDUs, new infections decreased 29% when comparing 2008 to 2010. Among male IDUs, new infections decreased 17% when comparing 2008 to 2010. [data not shown]



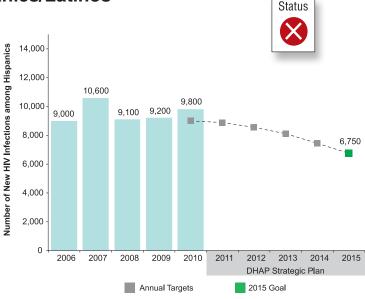
## **New HIV Infections among Blacks/African Americans**

- In 2010, blacks/African Americans represented 12% of the US population but accounted for almost half (44%) of all new HIV infections.
- New HIV infections among blacks/ African Americans overall were stable. The 2010 target was met because there were fewer new infections compared to the 2006 baseline.
- Among black/African American females, new HIV infections decreased 21% from 2008 to 2010. [data not shown]
- Comparing 2008 to 2010, new infections increased 22% among black/African American males aged 13-24 years and decreased 9% among those aged 35 years and older. [data not shown]



## New HIV Infections among Hispanics/Latinos

- Hispanics/Latinos represented about 16% of the US population yet accounted for 21% of all new HIV infections in 2010.
- Overall, new HIV infections remained fairly stable among Hispanics/Latinos.
   The 2010 target was not met because there were more new infections in that year compared to the 2006 baseline.
- Among Hispanics/Latinos, the majority of new HIV infections are attributable to male-to-male sex. New infections increased 19% among Hispanic/Latino MSM (including Hispanic/Latino MSM-IDUs) when comparing 2008 to 2010 and declined among IDUs and heterosexuals. [data not shown]



New HIV infections are higher among Hispanic/Latino males than females across all age groups.
 Comparing 2008 to 2010, the largest increase in new infections occurred among Hispanic/Latino males aged 13-24 years. [data not shown]

# REDUCE HIV-RELATED DISPARITIES: LINKAGE TO HIV MEDICAL CARE

Increase the percentage of persons diagnosed with HIV who are linked to HIV medical care within 3 months after diagnosis to 85% or greater for all racial/ethnic groups

It is essential to ensure that people of all races/ethnicities get HIV medical care within 3 months after receiving an HIV diagnosis. This benefits their health and reduces the risk of onward transmission of the virus. The unique needs and perspectives of members of specific racial/ethnic groups must be addressed in order to ensure that all HIV-diagnosed individuals are linked to HIV medical care without delay.

CDC monitors linkage to HIV medical care using laboratory data from areas with complete reporting of CD4 and viral load test results. The number of areas these data are based on increased from 13 for 2009 to 19 for 2011. People who had a CD4 or viral load test within 3 months after diagnosis are counted as being linked to HIV medical care.

In 2011, more than 75% of HIV-diagnosed blacks/African Americans, Hispanics/Latinos, whites, and persons of other race/ethnicity were linked to HIV medical care within 3 months after diagnosis. The original 2015 goal of 75% was met or exceeded by all groups in 2011. Because of this, CDC increased its 2015 goal for linkage to HIV medical care to 85% for all racial/ethnic groups. This revised goal promotes health equity by setting the standard that all racial/ethnic groups should meet or exceed the overall national goal of 85% for linkage to HIV medical care. The annual targets in this report are based on the revised goal of 85%. Based on the revised goal, the 2011 targets were met for whites and persons of other race/ethnicity. The 2011 targets were not met for either blacks/African Americans or

Achieving the revised goal of 85% for all racial/ethnic groups will require improved coordination and collaboration among health care providers, health departments, and community-based organizations to successfully link more people with HIV. especially blacks/African Americans, to HIV medical care.

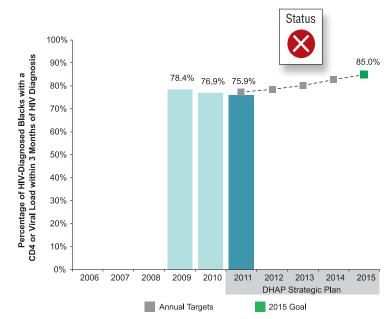
Data Source: National HIV Surveillance System (NHSS). See references and on-line Technical Notes for additional information.

All groups met the original 2015 goal of 75%; the goal has been increased to 85% for all groups

Hispanics/Latinos.

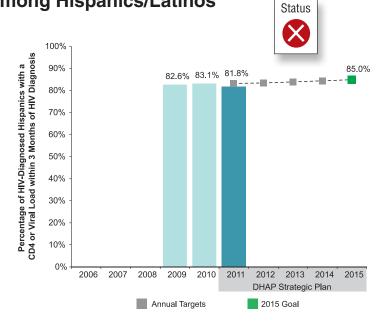
#### Linkage to HIV Medical Care among Blacks/African Americans

- In 2011, about 3 of 4 HIV-diagnosed blacks/African Americans (75.9%) were linked to HIV medical care within 3 months after diagnosis.
- Blacks/African Americans were the only racial/ethnic group in which the percentage linked to HIV medical care was less than 80% in 2011.
- The percentage of HIV-diagnosed blacks/African Americans linked to HIV medical care did not improve from 2009 to 2011. The revised 2011 target was not met.
- More progress will be needed in order to achieve the revised 2015 goal of 85%.



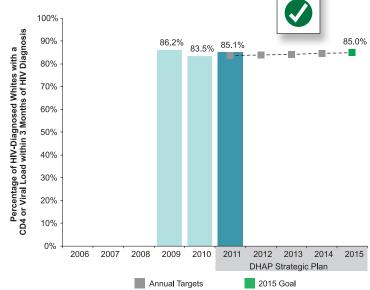
# Linkage to HIV Medical Care among Hispanics/Latinos

- In 2011, about 4 of 5 HIV-diagnosed Hispanics/Latinos (81.8%) were linked to HIV medical care within 3 months after diagnosis.
- The percentage of HIV-diagnosed Hispanics/Latinos who were linked to HIV medical care was fairly stable from 2009 to 2011. The revised 2011 target was not met.
- More progress will be needed in order to achieve the revised 2015 goal of 85%.



## **Linkage to HIV Medical Care among Whites**

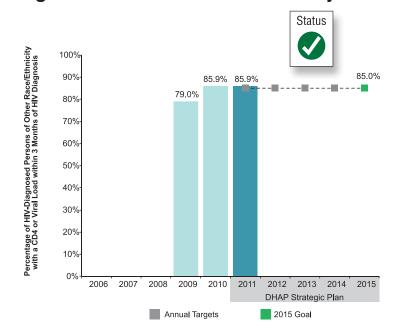
- In 2011, more than 4 of 5 HIV-diagnosed whites (85.1%) were linked to HIV medical care within 3 months after diagnosis.
- Linkage to HIV medical care was stable among whites from 2009 to 2011.
- In 2011, the revised 2015 goal of 85% had been met among whites.



Status

#### Linkage to HIV Medical Care among Persons of Other Race/Ethnicity

- There was a 9% overall increase in linkage to HIV medical care from 2009 to 2011 among persons from other racial/ethnic groups.
- Overall, 85.9% of HIV-diagnosed persons from other racial/ethnic groups had been successfully linked to HIV medical care in 2011.
- In 2011, the percentage linked to HIV medical care was 90.5% for Native Hawaiians/Other Pacific Islanders, 86.7% for persons of multiple races, 85.2% for American Indian/Alaska Natives, and 84.6% for Asians. [data not shown]
- In 2011, the revised 2015 goal of 85% had been met among persons of other race/ethnicity.







improves health

and reduces

the risk of HIV

transmission

# REDUCE HIV-RELATED DISPARITIES: VIRAL SUPPRESSION AMONG HIV-DIAGNOSED PERSONS

Increase the percentage of HIV-diagnosed men who have sex with men (MSM), blacks/ African Americans, and Hispanics/Latinos with a suppressed viral load by at least 20%

Increasing viral suppression among all people with HIV is an important public health goal, especially in communities that have the greatest burden of HIV.

CDC monitors viral suppression among people in HIV medical care (see page 21) and uses this information along with surveillance data on people living with an HIV diagnosis to estimate viral suppression among all HIV-diagnosed people in the United States and Puerto Rico. This includes those who are in HIV medical care and those who are not. This indicator of viral suppression estimates how many HIV-diagnosed people have an HIV viral load that is undetectable or 200 or fewer copies of HIV per milliliter of plasma. Among HIV-diagnosed people, viral suppression can be influenced by many things including linkage to HIV medical care, retention in HIV medical care, and timely HIV treatment and adherence.

The overall percentage of HIV-diagnosed people with a suppressed viral load remained fairly stable from 2009 (37.3%) to 2010 (39.0%).

Improvements were seen among HIV-diagnosed gay, bisexual, and other men who have sex with men (collectively referred to as MSM); blacks/African Americans; and Hispanics/Latinos. The 2010 target was met for all 3 groups.

Although the 2010 target was met, the majority of HIV-diagnosed MSM, blacks/African Americans, and Hispanics/Latinos do not have suppressed viral load. Improvements in linkage to HIV medical care, retention, HIV treatment, and adherence can all contribute to increasing viral suppression and achieving the nation's 2015 goals.

## Viral Suppression among HIV-Diagnosed MSM

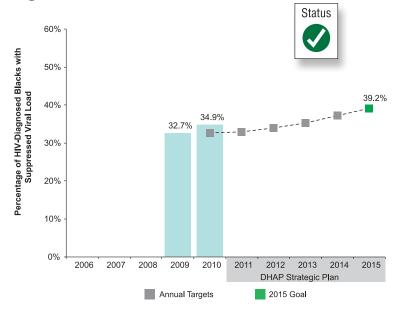
- Among HIV-diagnosed men whose HIV infection was attributed to male-to-male sexual contact, 40.7% had a suppressed viral load in 2009.
- Although the 2010 target was met, viral suppression remained fairly stable from 2009 to 2010. Further improvement will be needed in order to achieve the 2015 goal.



Data Source: Medical Monitoring Project (MMP) and National HIV Surveillance System (NHSS). See references and on-line Technical Notes for additional information.

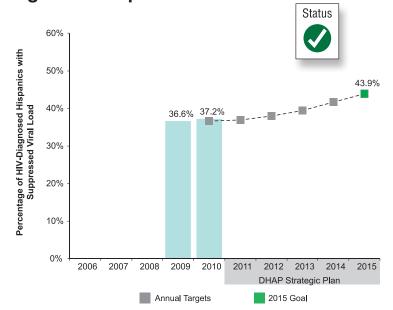
#### Viral Suppression among HIV-Diagnosed Blacks/African Americans

- The percentage of HIV-diagnosed blacks/African Americans who had a suppressed viral load increased from 32.7% in 2009 to 34.9% in 2010.
- The 2010 target was met, but continued improvement will be needed in order to achieve the 2015 goal.



## Viral Suppression among HIV-Diagnosed Hispanics/Latinos

- Among HIV-diagnosed Hispanics/ Latinos, 37.2% had a suppressed viral load in 2010.
- The 2010 target was met, but continued improvement will be needed in order to achieve the 2015 goal.



# SELECTED REFERENCES

Blair JM, McNaghten AD, Frazier EL, Skarbinski J, Huang P, Heffelfinger JD. Clinical and behavioral characteristics of adults receiving medical care for HIV infection—Medical Monitoring Project, United States, 2007. MMWR Surveillance Summaries. 2011;60(11):1-20.

CDC. Division of HIV/AIDS Prevention Annual Report 2012: Maximizing Impact. <a href="http://www.cdc.gov/hiv/pdf/policies">http://www.cdc.gov/hiv/pdf/policies</a> DHAP AnnualReport 2012.pdf. Published May 2013. Accessed August 20, 2013.

CDC. Division of HIV/AIDS Prevention Strategic Plan, 2011–2015. <a href="http://www.cdc.gov/hiv/strategy/dhap/pdf/DHAP-strategic-plan.pdf">http://www.cdc.gov/hiv/strategy/dhap/pdf/DHAP-strategic-plan.pdf</a>. Published August 2011. Accessed August 20, 2013.

CDC. Estimated HIV incidence among adults and adolescents in the United States, 2007-2010. *HIV Surveillance Suppemental Report.* 2012;17(4). <a href="http://www.cdc.gov/hiv/pdf/statistics-hssr-vol\_17\_no\_4.pdf">http://www.cdc.gov/hiv/pdf/statistics-hssr-vol\_17\_no\_4.pdf</a>. Published December 2012. Accessed August 20, 2013.

CDC. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data: United States and 6 dependent areas—2011. *HIV Surveillance Supplemental Report*. 2013;18(5). <a href="https://www.cdc.gov/hiv/pdf/2011">https://www.cdc.gov/hiv/pdf/2011</a> Monitoring HIV Indicators HSSR FINAL.pdf. Published October 2013. Accessed October 31, 2013.

Department of Health and Human Services. Healthy People 2020. Topics and Objectives: HIV. <a href="http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=22">http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=22</a>. Accessed August 20, 2013.

Farnham PG, Gopalappa C, Sansom SL, Hutchinson AB, Brooks JT, Weidle PJ, Marconi VC, Rimland D. Updates of lifetime costs of care and quality of life estimates for HIV-infected persons in the United States: Late versus early diagnosis and entry into care. *J Acquir Immune Defic Syndr.* 2013;64:183–189.

Frankel MR, McNaghten A, Shapiro MF, Sullivan PS, Berry SH, Johnson CH, Flagg EW, Morton S, Bozzette SA. A probability sample for monitoring the HIV-infected population in care in the U.S. and in selected states. *Open AIDS J.* 2012;6(Suppl1):67-76.

Hall HI, Frazier EL, Rhodes P, Holtgrave DR, Furlow-Parmley C, Tang T, Mahle Gray K, Cohen S, Mermin J, Skarbinski J. Differences in human immunodeficiency virus care and treatment among subpopulations in the United States. *JAMA Intern Med.* 2013;173:1337-1344.

Lansky A, Abdul-Quader AS, Cribbin M, Hall T, Finlayson TJ, Garfein RS, Lin L, Sullivan PS. Developing an HIV behavioral surveillance system for injecting drug users: The National HIV Behavioral Surveillance System. *Public Health Reports*. 2007;122(Suppl1):48-55.

MacKellar AF, Gallagher K, Finlayson T, Sanchez T, Lansky A, Sullivan PS. Surveillance of HIV risk and prevention behaviors of men who have sex with men—A national application of venue-based, time-space sampling. *Public Health Reports*. 2007;122(Suppl1):39-47.

Mahle Gray K, Tang T, Shouse L, Li J, Mermin J, Hall HI. Using the HIV surveillance system to monitor the National HIV/AIDS Strategy. *AJPH*. 2013;103(1):141-147.

Mermin J, Fenton K. The future of HIV prevention in the United States. JAMA. 2012;308:347-348.

Nesheim S, Taylor A, Lampe MA, Kilmarz PH, Harris, LF, Whitmore S, Griffith J, Thomas-Proctor M, Fenton K, Mermin J. A framework for elimination of perinatal HIV transmission in the United States. *Pediatrics*. 2012;130:738-744.

Office of Management and Budget. Government Performance Results Act (GPRA) Modernization Act of 2010. <a href="http://www.gpo.gov/fdsys/pkg/BILLS-111hr2142enr.pdf">http://www.gpo.gov/fdsys/pkg/BILLS-111hr2142enr.pdf</a>. Accessed August 20, 2013.

The White House Office of National AIDS Policy. National HIV/AIDS Strategy for the United States. <a href="http://www.whitehouse.gov/sites/default/files/uploads/NHAS.pdf">http://www.whitehouse.gov/sites/default/files/uploads/NHAS.pdf</a>. Published July 2010. Accessed August 20, 2013.

Valdiserri RO, Forsyth AD, Yakovchenko V, Koh HK. Measuring what matters: Development of standard HIV core indicators across the U.S. Department of Health and Human Services. *Public Health Reports*. 2013;128:354-359.

See on-line Technical Notes for references to data sources and additional information for specific indicators. www.cdc.gov/hiv/policies/npr

